

Name

Key

Date

LESSON

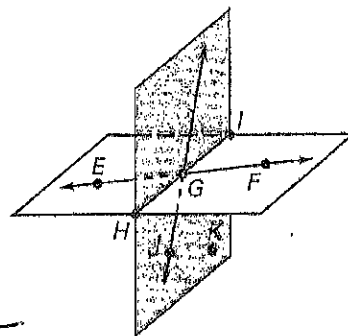
11

Practice B

For use with pages 2-8

Use the diagram to decide whether the given statement is true or false.

1. Points H , I , and G are collinear. **T**
2. Points H , I , and J are coplanar. **T**
3. \overrightarrow{EG} and \overrightarrow{FG} are opposite rays. **F**
4. All points on \overrightarrow{GI} and \overrightarrow{GF} are coplanar. **T**
5. The intersection of \overrightarrow{EF} and plane JKH is \overrightarrow{HI} . **F**
6. The intersection of \overrightarrow{EF} , \overrightarrow{HI} , and \overrightarrow{JG} is point G . **T**
7. The intersection of plane EGH and plane JGI is point G . **F**
8. The intersection of plane EFI and plane JKG is \overrightarrow{HG} . **T**



Sketch the figure described.

9. Two rays that do not intersect



10. Three planes that intersect in one line



11. Three lines that intersect in three points



12. A ray that intersects a plane in one point



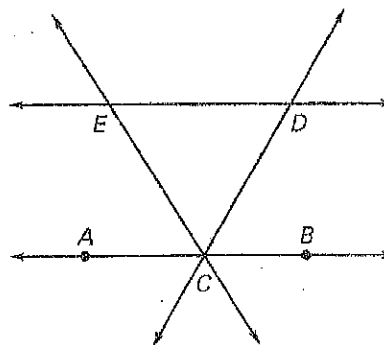
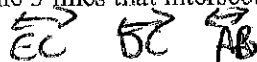
In Exercises 13-15, use the diagram.

- ~~13.~~
- Name 12 different rays.

14. Name a pair of opposite rays.

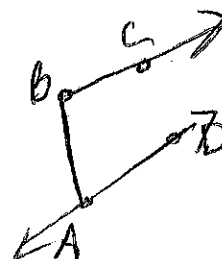
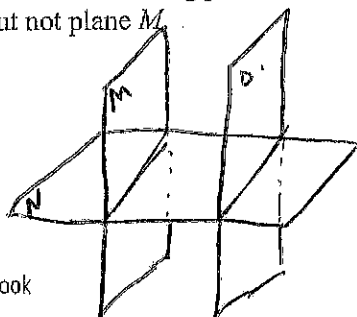


15. Name 3 lines that intersect at point C.



16. Draw four noncollinear points
- A
- ,
- B
- ,
- C
- , and
- D
- . Then sketch
- \overrightarrow{AB}
- ,
- \overrightarrow{BC}
- , and
- \overrightarrow{AD}
- .

17. Sketch plane
- M
- intersecting plane
- N
- . Then sketch plane
- O
- so that it intersects plane
- N
- , but not plane
- M
- .

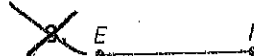
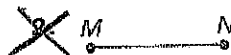


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LESSON 12 Practice B
For use with pages 9-14

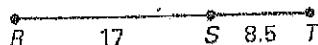
Measure the length of the segment to the nearest tenth of a centimeter.



Use the Segment Addition Postulate to find the indicated length.

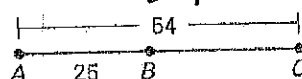
4. Find RT .

25.5



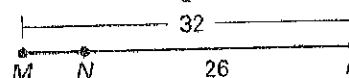
5. Find BC .

29



6. Find MN .

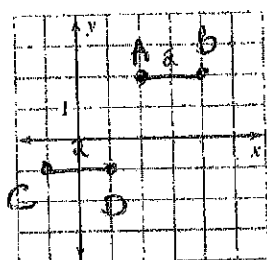
6



Plot the given points in a coordinate plane. Then determine whether the line segments named are congruent.

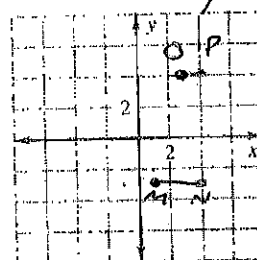
7. $A(2, 2)$, $B(4, 2)$, $C(-1, -1)$, $D(-1, 1)$;

\overline{AB} and \overline{CD} \cong



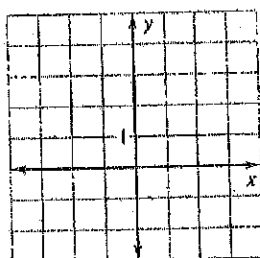
8. $M(1, -3)$, $N(4, -3)$, $O(3, 4)$, $P(4, 4)$;

\overline{MN} and \overline{OP} $\not\cong$



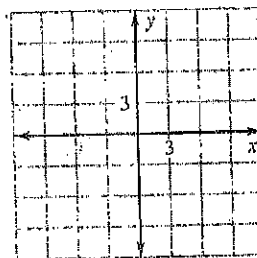
~~9.~~ $E(-3, 4)$, $F(-1, 4)$, $G(2, 4)$, $H(-1, 1)$;

\overline{EG} and \overline{FH}

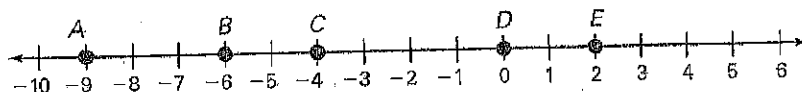


~~10.~~ $R(3, 5)$, $S(10, 5)$, $T(-4, -3)$, $U(-11, -3)$;

\overline{RS} and \overline{TU}



Use the number line to find the indicated distance.



11. AB 3

12. AD 9

13. CD 4

14. BD 6

15. CE 6

16. AE 11

17. BE 8

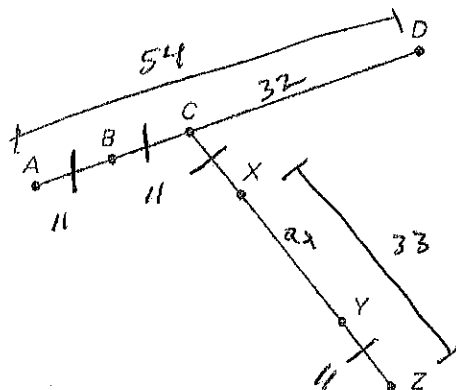
18. DE 2

LESSON
1.2

Practice B *continued*
For use with pages 9-14

In the diagram, points A, B, C, and D are collinear, points C, X, Y, and Z are collinear, $AB = BC = CX = YZ$, $AD = 54$, $XY = 22$, and $XZ = 33$. Find the indicated length.

19. $AB = 11$
20. $BD = 43$ $32+11$
21. $CY = 33$ $22+11$
22. $CD = 32$
23. $XC = 11$
24. $CZ = 44$



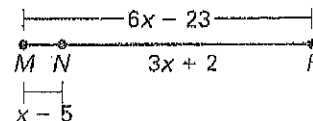
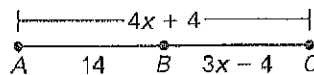
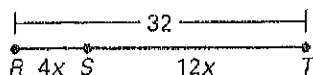
$$\begin{array}{r} 54 \\ -22 \\ \hline 32 \end{array} \quad \begin{array}{r} 33 \\ -22 \\ \hline 11 \end{array}$$

Find the indicated length.

25. Find ST. **24**

26. Find AC. **28**

27. Find NP. **32**



$$12x + 4x = 32$$

$$16x = 32$$

$$x = 2$$

$$3x - 4 + 14 = 4x + 4$$

$$3x + 10 = 4x + 4$$

$$6 = x$$

$$x - 5 + 3x + 2 = 6x - 23$$

$$4x - 3 = 6x - 23$$

$$20 = 2x$$

$$10 = x$$

Point J is between H and K on \overline{HK} . Use the given information to write an equation in terms of x . Solve the equation. Then find HJ and JK.

28. $HJ = 2x$ **10**
 $JK = 3x$ **15**
 $KH = 25$

$$2x + 3x = 25$$

$$5x = 25$$

$$x = 5$$

29. $HJ = \frac{x}{4} = 2$ **4**
 $JK = 3x - 4 = 20$ **20**
 $KH = 22$

$$\frac{x}{4} + 3x - 4 = 22$$

$$x + 12x - 16 = 88$$

$$13x = 104$$

$$x = 8$$

Simplify the expression.

11. $-\sqrt{99}$

12. $\sqrt{48}$

13. $4\sqrt{6} \cdot 2\sqrt{15}$

27. $\frac{12}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{12\sqrt{6}}{6} = 2\sqrt{6}$

Use substitution to solve the linear system.

7. $2x + 4y = -18$
 $3x - y = 1$

$$2x + 4(3x - 1) = -18$$

$$2x + 12x - 4 = -18$$

$$14x = -14$$

$$x = -1$$

Use elimination to solve the linear system.

12. $10x + 15y = 90$
 $-2(5x - 4y = -1)$

$$10x + 15y = 90$$

$$-10x + 8y = 2$$

$$23y = 92$$

$$y = 4$$

$$x = 3$$

Factor to solve for #s 25 & 28

25. $(x+5)(x+1) = 0$
 $x = -5$ $x = -1$

28. $2x = 8x^2 - 3$

28. $0 = 8x^2 - 2x - 3$
 $0 = 8x^2 - 6x + 4x - 3$
 $2x(4x - 3) + 1(4x - 3)$
 $(2x + 1)(4x - 3)$
 $x = -\frac{1}{2}$ $x = \frac{3}{4}$

Use the quadratic formula to solve for #s 29 & 34

29. $x^2 + 7x + 5 = 1$
 $x^2 + 7x + 4 = 0$

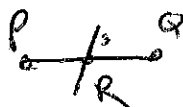
$$x = \frac{-7 \pm \sqrt{49 - 4(1)(4)}}{2(1)}$$

$$x = \frac{-7 \pm \sqrt{33}}{2}$$

29. $x = \frac{-7 \pm \sqrt{49 - 4(1)(4)}}{2(1)}$
 $x = \frac{-7 \pm \sqrt{33}}{2}$

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LESSON
13**Practice B**
For use with pages 15-22

1. Line
- RS
- bisects
- \overline{PQ}
- at point
- R
- . Find
- RQ
- if
- $PQ = 14$
- centimeters.
- 7cm**

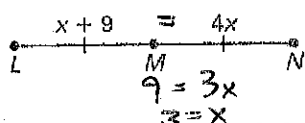
2. Line
- JK
- bisects
- \overline{MN}
- at point
- J
- . Find
- MN
- if
- $JM = 6\frac{3}{4}$
- feet.
- 13.5 ft**

3. Point
- T
- bisects
- \overline{UV}
- . Find
- UV
- if
- $UT = 4\frac{1}{2}$
- yards.
- 9 yds**

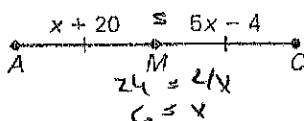
4. Point
- C
- bisects
- \overline{AB}
- . Find
- CB
- if
- $AB = 14.8$
- meters.
- 7.4m**

In the diagram, M is the midpoint of the segment. Find the indicated length.

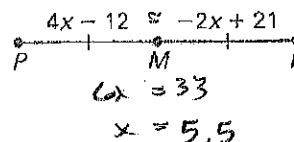
5. Find
- LN
- .
- 24**



6. Find
- AM
- .
- 26**



7. Find
- MR
- .
- 3/10**



Find the coordinates of the midpoint of the segment with the given endpoints.

- 8.
- $S(4, -1)$
- and
- $T(6, 0)$
- $(5, \frac{1}{2})$**

- 9.
- $L(4, 2)$
- and
- $P(0, 2)$
- $(2, 2)$**

- 10.
- $H(-5, 5)$
- and
- $I(7, 3)$
- $(1, 4)$**

- 11.
- $G(-2, -8)$
- and
- $H(-3, -12)$
- $(-2\frac{1}{2}, -10)$**

Use the given endpoint R and midpoint M of \overline{RS} to find the coordinates of the other endpoint S .

- 12.
- $R(6, 0)$
- ,
- $M(0, 2)$
- $S(-6, 4)$**

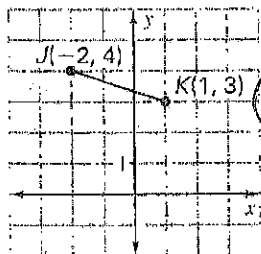
- 13.
- $R(3, 4)$
- ,
- $M(3, -2)$
- $S(3, -8)$**

- 14.
- $R(-3, -2)$
- ,
- $M(-1, -8)$
- $S(1, -14)$**

- 15.
- $R(11, -5)$
- ,
- $M(-4, -4)$
- $S(-19, -3)$**

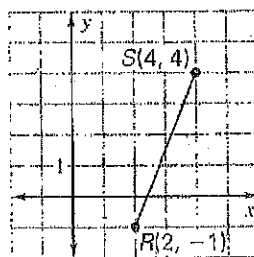
Find the length of the segment. Round to the nearest tenth of a unit.

- 16.
- $d = \sqrt{(1-2)^2 + (3-4)^2} = 1.7$**



$$JK = \sqrt{10}$$

$$\approx 3.2$$

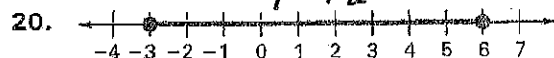


$$SR = \sqrt{(4-2)^2 + (4-(-1))^2}$$

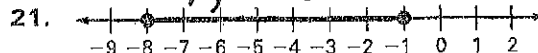
$$SR = \sqrt{29}$$

$$\approx 5.4$$

Find the length of the segment. Then find the coordinates of the midpoint of the segment.



20.



21.

The endpoints of two segments are given. Find each segment length. Tell whether the segments are congruent.

- 22.
- \overline{AB}
- :
- $A(2, 6)$
- ,
- $B(0, 3)$

$$AB = \sqrt{2^2 + 3^2}$$

$$AB = \sqrt{13}$$

- 24.
- \overline{KL}
- :
- $K(-4, 13)$
- ,
- $L(-10, 6)$

$$KL = \sqrt{(-4-(-10))^2 + (13-6)^2}$$

$$KL = \sqrt{36 + 49}$$

$$KL = \sqrt{85}$$

- \overline{CD}
- :
- $C(-1, 0)$
- ,
- $D(1, 3)$

$$CD = \sqrt{2^2 + 3^2}$$

$$CD = \sqrt{13}$$

$$\overline{CD} \cong \overline{AB}$$

- \overline{MN}
- :
- $M(-1, -2)$
- ,
- $N(-1, -11)$

$$MN = \sqrt{(-1-(-1))^2 + (-2-(-11))^2}$$

$$MN = 9$$

- 25.
- \overline{OP}
- :
- $O(6, -2)$
- ,
- $P(3, -2)$

$$\overline{OR}$$
: $O(5, 2)$, $R(1, 5)$

$$\neq$$